

AE-T100 Micro Turbine

Natural Gas



DATA SHEET

General

Installation	Indoor / Outdoor
Size (WxHxL)	900 x 1810 x 2770mm (P) - 900 x 1810 x 3900mm (CHP)
Weight	2250/2750 kg* (P) - 2770/3100 kg* (CHP)
Fuel	Natural Gas (methane)

(*) indoor / outdoor layout

Microturbine

Compressor type	Centrifugal, single stage
Turbine type	Radial, single stage
Type /Number of combustion chambers	Lean premix / 1 chamber CAN Type
Pressure in combustion chamber	4.5 bar(a)
Turbine Inlet Temperature (TIT)	950 °C
Number of shafts	1 (single shaft)
Nominal rotational speed	70000 RPM
Lubrication oil consumption	< 3 l/6000 EOH

Electrical data

Frequency output	50 Hz (60 Hz on request)
Voltage output	400 V (AC), three phases

Fuel requirements

Required pressure	(0.02 ÷ 0.500) bar(g)
Required temperature	(0 ÷ 60) °C
Lower Heating Value (LHV)	(38 ÷ 50) MJ/kg*

Performances

Electrical output	(100 ± 3) kWel
Thermal output (hot water)	(167 ± 5) kWth (@ 50-70 °C)
Electrical Efficiency	(30 ± 1) %
Total cogeneration efficiency	(80 ± 1) %
Fuel consumption	333 kWth ≈ 34 Nm ³ /h*
Exhaust gas flow	≈ 0.80 kg/s
Exhaust gas temperature	270 °C
Sound Power	85,4 dB(A)

(*): depending on fuel LHV

Emissions (@ Full load and 15% O₂)

NO _x	< 15 ppm(v) = 32 mg /MJth(fuel)
CO	< 15 ppm(v) = 18 mg/MJth(fuel)

Versions

	Power only (P)
	Co-generation (CHP)
	Tri-generation (CCHP)

The natural gas version of AE-T100 represents the standard **AnsaldoTurbec** product and it is used in most of current installations.

Some application fields:

- Hotels,
- Swimming pools,
- Leisure centres,
- Hospitals,
- Apartment buildings,
- Retirement homes,
- Farms,
- Dairies,
- Salami factories,
- Pasta industries,
- Wineries and Breweries
- Distilleries,
- Industrial laundries,
- Painting plants.

The low maintenance requirements of the AE-T100, with service intervals of 6000 equivalent operating hours, makes this power generation system extremely attractive and competitive when compared to more conventional solutions.

Each AE-T100 configuration can be delivered in specific layouts for indoor or outdoor installation. Both layouts meet current regulations limits for noise and emissions.

All AE-T100 can be remotely monitored, controlled and operated.